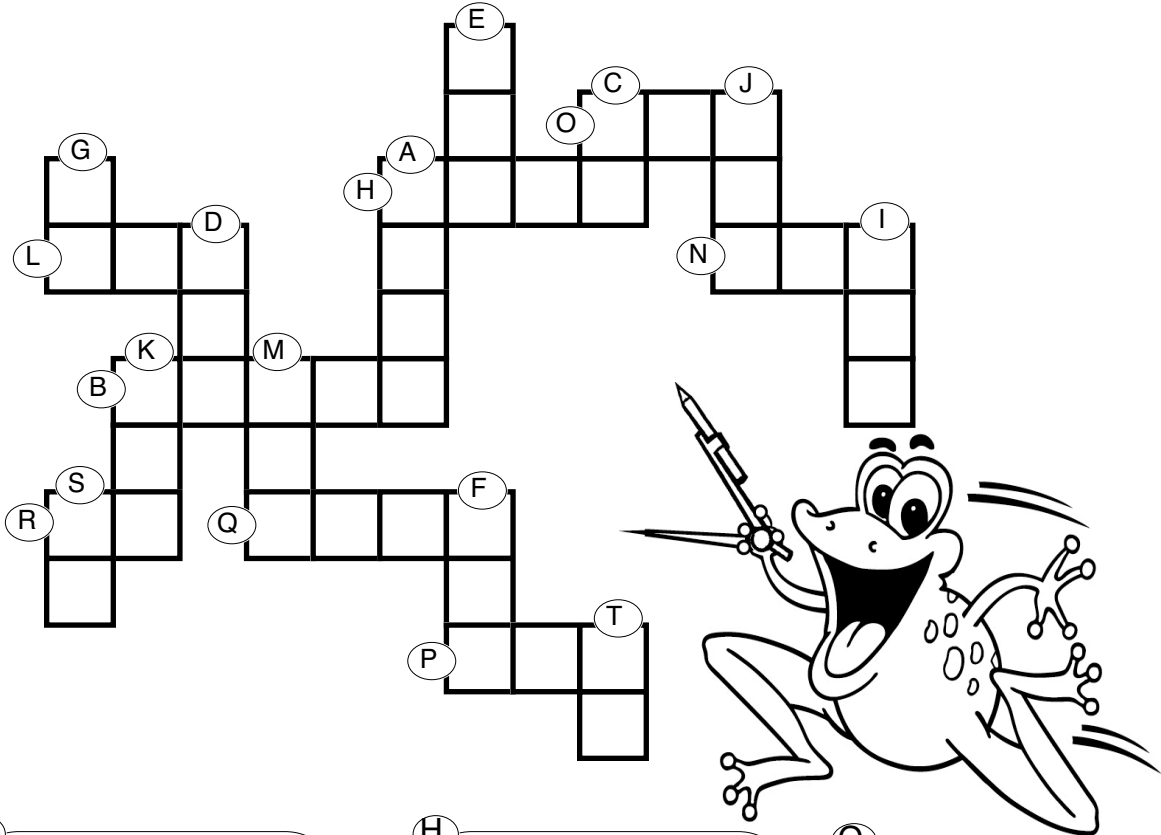


## Puzzle 18: Order of Operations with Parentheses

Evaluate the expressions using the correct order of operations.



**A**  $100(5 + 12)$

**B**  $(15 + 10 \cdot 10)(90 + 10)$

**C**  $(400 + 2 \cdot 25) \square (10 - 1)$

**D**  $(2 + 3 + 6)^2$

**E**  $(10 - 2 \cdot 3)(5 + 5 \cdot 5)$

**F**  $1000 - (35 + 10)$

**G**  $(5 + 2 \cdot 2)^2$

**H**  $(25 + 25)(15 + 5)$

**I**  $466 + 5^2(3 + 5)$

**J**  $20^2 + 10^2(12 - 8) + 8$

**K**  $1000 \square (1 + 3^2) + 5^2$

**L**  $1510 \square (2 + 2 \cdot 4)$

**M**  $258 + 5(30 + 5 \cdot 6)$

**O**  $10(30 + 20) + 8$

**P**  $2(8^2 + 6^2) + 352$

**Q**  $10^3(10 - 9)(2 + 6) + 7^2$

**R**  $(100 - 2 \cdot 15) \square (6 - 4)$

**S**  $(5 + 4)(12 - 8)$

**T**  $40 - (30 - 15)$

**N**  $5(10 + 40) + 10(50 + 5) + 4^2$

# Puzzle 18: Order of Operations with Parenthesis

## Mini-Lesson: Rewriting Expressions

Ask students

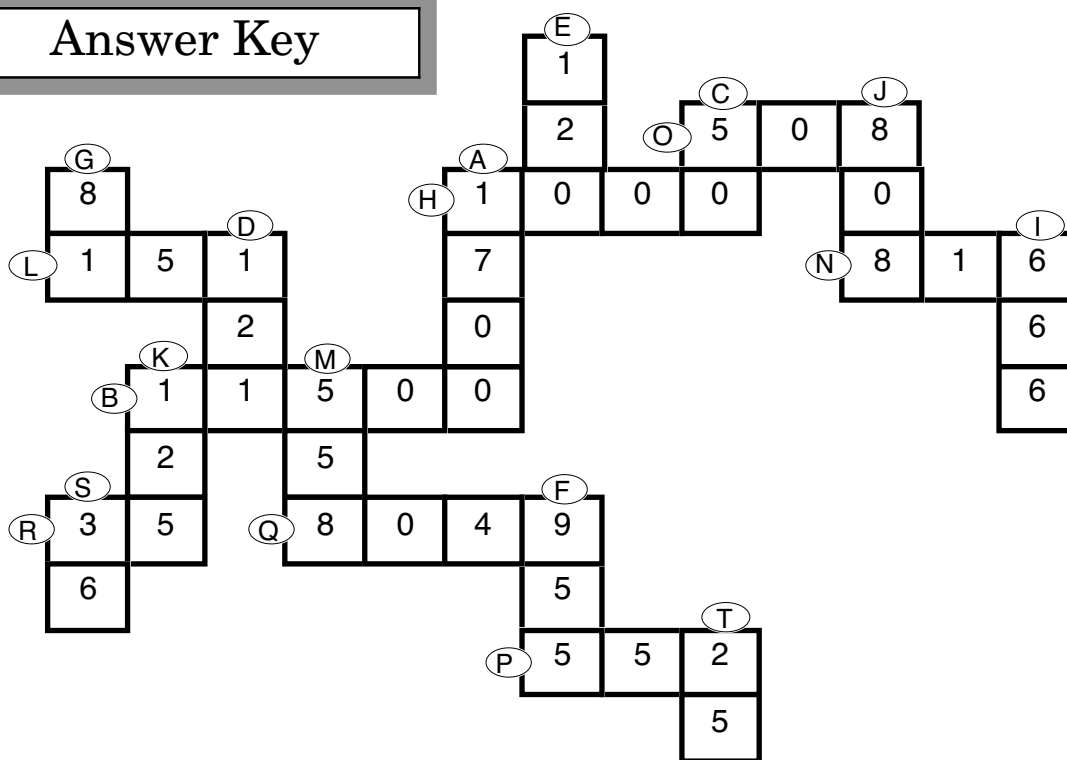
Q: How do you evaluate  $1000 - (35 + 10)$ ?

A: You add  $35 + 10$  and subtract the answer from 1000.

Q: Can you write an equivalent expression to  $1000 - (35 + 10)$  without parentheses?

A: Yes,  $1000 - 35 - 10$ . You subtract the 35 and 10 from 1000.

## Answer Key



A  $100(5 + 12) = 1700$

B  $(15 + 10 \cdot 10)(90 + 10) = 11500$

C  $(400 + 2 \cdot 25) \square (10 - 1) = 50$

D  $(2 + 3 + 6)^2 = (11)^2 = 121$

E  $(10 - 2 \cdot 3)(5 + 5 \cdot 5) = 120$

F  $1000 - (35 + 10) = 955$

G  $(5 + 2 \cdot 2)^2 = 81$

H  $(25 + 25)(15 + 5) = 1000$

I  $466 + 5^2(3 + 5) = 666$

J  $20^2 + 10^2(12 - 8) + 8 = 808$

K  $1000 \square (1 + 3^2) + 5^2 = 125$

L  $1510 \square (2 + 2 \cdot 4) = 151$

M  $258 + 5(30 + 5 \cdot 6) = 558$

O  $10(30 + 20) + 8 = 508$

P  $2(8^2 + 6^2) + 352 = 552$

Q  $10^3(10 - 9)(2 + 6) + 7^2 = 8049$

R  $(100 - 2 \cdot 15) \square (6 - 4) = 35$

S  $(5 + 4)(12 - 8) = 36$

T  $40 - (30 - 15) = 25$

N  $5(10 + 40) + 10(50 + 5) + 4^2 = 816$